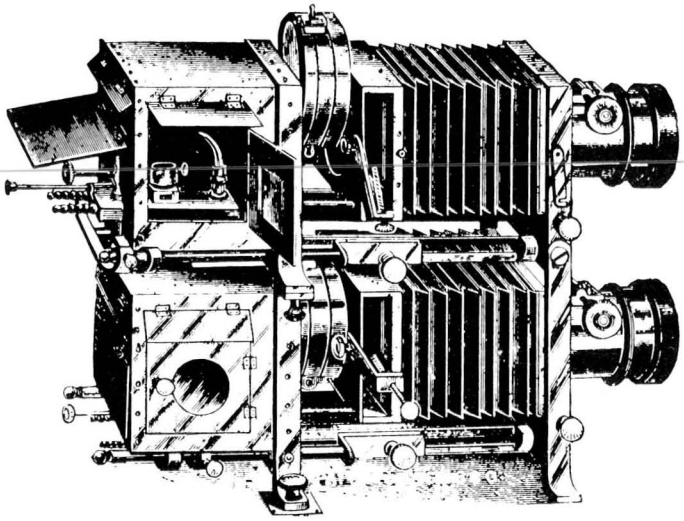


THE IMPROVED "BOSTON IDEAL."

THE
MAGIC LANTERN
BULLETIN

VOL. 18, NO. 1
APRIL, 1988

A Journey by Dick Balzer

A journey begins in many ways. This particular journey began a little more than three years ago when I met Ernst Hrabelak in England. We became friends quickly. Twice in the following year Ernst came for brief visits to my home. We talked, we traded stories, some toy lanterns left my collection and Ernst brought pictures of his toy lantern collection which I found staggering. Each time when he left I promised to bring my family for a visit. But the trip didn't occur. Last summer it seemed a possibility, but still it didn't happen. Another year, another promise and finally this past August my wife, two children and I boarded a plan in Boston and made our way to Vienna.

Our plan was a relaxed ten days in Vienna and then on to England. Soon after arriving in Vienna, Ernst, who met us at the airport with a van, announced that the next day we were to start a journey around Austria and Germany to visit several museums with magic lanterns. After a little protestation about this scheduled journey and our own plans for relaxation, we relented in a somewhat atypical fashion to be sheparded by the Hrabeleks.

Still we couldn't start until I had at least taken a look at Ernst's collection. So that night we arrived, Ernst and I stole away for a tour of his collection. Pictures and even his new book hardly do the collection justice. I couldn't take it all in in the two hours we spent. More about this special collection later.

The Magic Lantern Bulletin is printed by Evans Printing, Solon, Ohio. Entire contents ©by the Magic Lantern Society of the U.S. and Canada, Watertown, MA, 1988.

As promised the second morning Ernst and his wife and two children and my family stepped into a rented van and headed out. The first stop was a small photographic museum in Bad Ischel. One enters an old estate and winds ones' way up a hill to this lovely little museum.

We spent the next four days wandering around the Austrian countryside and venturing into Munich. We got to see Austria in a way we couldn't have imagined. Ernst had kindly arranged for us to visit museums in Bad Ischel, Salzburg and Munich. Each museum was a treat. The first museum was a photographic museum located on an estate in Bad Ischel. The second was a toy museum in the city of Salzburg, the third and fourth museums were located in Munich. What was wonderful about these visits was not just seeing some rare slides, unusual lanterns, and marvelous optical toys.

It seemed that at each museum Ernst knew the curator and the treat at three of the four museums was a visit to a backroom or upstairs storage space. Anyone familiar with museums knowns that much of the best of the museums collection is not on view but is stored somewhere. And so it is with the museums we visited. My most vivid memories are of the museum in Bad Ischel and the Salzburg toy museum. At the first museum it was the seventy-eight year old proprietor who took us to the back room which was little more than a big closet, but in it were packed some lovely lanterns and optical toys. As we closed the door behind us, I thought how many treasures, how many rare and wonderful things do not see the light of day.

We arrived in Salzburg with a driving rain and no place to park near the museum. We saw little of Salzburg making a mad dash to the museum. Full of children's toys it was just what was needed for a rainy day. While we looked at the displays Ernst disappeared to reappear with one of the curators, and soon we were climbing stairs and disappearing into the attic storeroom. And soon it was opening doors, pulling out boxes, looking at various slides. Most special for me, was a set of early 19th century hand painted long slides.

The museums were a great treat, even if four museums in four days makes it hard to recall which lantern was seen where. But this part of the journey was extraordinary not just because of the museum, but because of the things we saw and did which we would not have likely done ourselves as tourists. There was the ice mountain caves, the lakeside swimming, staying in a small woodbeamed guest house, and attending a small town Bavarian singing and dancing festival, with lederhosen everywhere and cow bells ringing. We had tea with Ernst's in-laws in an apartment in Munich and ate at small cafes in Bad Ischel. We saw things we would not have found by ourselves. Ernst's kids and ours played and laughed and we had a marvelous and not soon to be forgotten tour of Austria.

Back in Vienna there was yet more to see including a seocnd visit to Ernst's toy lantern museum. Unlike the other museums, Ernst's collection is not housed in a fancy edifice but rather within his company's offices. We walked past and through a series of offices to an open space in an upstairs office, and then pushing back a giant door — there it was — this grand and packed museum with more than two hundred toy magic lanterns.

Where and how should I begin to describe the collection? Starting at the beginning is usually a good idea. The main room that one enters is so overwhelming that it is hard to get through. One is immediately struck by the Two Chinamen perched "Buddha" like watching over the other lanterns. There they stand, those two magnificent lanterns. Having a Chinaman in ones collection would be great, seeing two less than twelve inches from one another is staggering.

I had to suck in my breath, pull back for a moment, regain my composure before going on. There are several other things in this main room; a giant lampascope, five different pierced tin lanterns, and various uncommon, if not spectacular lanterns. Hidden in it's own compartment is Ernst's little red racing car lantern. I have never seen a piece like it and probably won't see another. It is small, brilliantly red, and unique.

I couldn't tell how quickly or slowly I was moving but I became aware that I was in another room. Here the pieces might not be so powerfully unique as the first room but still there were many pieces that deserved

close attention. There was a beautiful brown lantern painted with Japanese figures. Of the many other lanterns, the one I spent the most time looking at was a lantern shaped like a mosque called the Lanterne de Orient. This small mosque-like lantern has it's little minarettes and is beautiful. Past these two spectacular lanterns were the room's "Lesser Lanterns", a dozen Lampierre lanterns, two toy lanterns shaped like pagodas, and two porcelain lanterns. Intersperced with the lanterns are a small but delightful collection of lantern slides, which seem an afterthought in this museum of lanterns.

In the next room are still another forty or fifty lanterns and an interesting case in the middle worth stopping and looking at. There are a series of patents housed in this case. Ernst Hrabelek does more than just collect the lanterns themselves. He has spent considerable time researching the manufacturers who produced the lanterns. His search to understand the history and the production of the lantern has led him to uncover some patents for lanterns and new equipment. He takes pride in this little display, and though nowhere as visually appealing as the lanterns, this small display is not to be missed. Included in the exhibit is the patent for the unusual German conic lantern dated 1885.

Trying to catch my composure from visual overload, I stepped into a somewhat darkened space which Ernst designed to look like a Victorian parlour room outfitted with family figures and period pieces. This space acts as a break and allows the mind to unjumble, to breath and relax before entering the last room which houses many pieces that might be found in a more typical collection. Still looking closely one can find a small Eiffel Tower lantern and EP toy horizontal biunial.

There are small lanterns, late lanterns that have attachments for film strips. Emerging from this room one is back again in the main room. There, still quietly, almost inscrutably, stand the two Buddhas quietly smiling, overseeing this grand collection.

Standing there I thought the Buddhas themselves might have stories about their joruneys, and now I shared with them in that mine had been a special journey which wonderfully included this extraordinary collection.

The Magic Lantern In the 1920's and 30's

By Bob Bishop

The tie that binds is hard to part. In the earliest days of the magic lantern (the 1650's) it was reported that Father Athanasius Kircher, a Jesuit priest, would hide himself in a basement room, project an image of the devil upon a paper window. Drunken citizens passing by would suddenly become aware of old Satan leering at them from the darkness. Terrified, off they would rush to the nearest church to be saved. That was in the beginning.

In latter days of the magic lantern many practices were much the same. The lantern was all but forgotten in the decade of the Roaring Twenties. That ill-begotten illegitimate child, the moving picture, had driven the magic lantern and all galantee showmen out of the public eye.

Still, some vestige of the old days remained in the 1920's. Lodges and fraternal groups used the lantern for their own purposes. Slide shows were presented showing the evils of drink, and promoting Prohibition. Churches used the lantern to project visually their secular views. But, except in rare caes in remote areas, the lantern no longer served a major purpose at local theaters. The smallest of movie houses now had two projectors, and scarcely a flicker disturbed the silent screen as one reel followed another. The magic lantern was reduced to flashing an announcement slide stating, "Dr. Jones, call the hospital," or perhaps advertising the wares of a local merchant. True, many of the theaters still showed the coming attraction slides with the lantern. But this was a last gasp, though the practice did continue into the next decade of the 1930's. Even this use was to vanish as descriptive trailers more appropriately showcased the coming film attractions.

Still, an occasional magic lantern show would surface. I have heard of such a program showcased at the Chicago World's Fair of 1932. But schools held on to their Bausch & Lomb projectors and religious sectarians continued to use the lantern to promote their causes, even as old Kircher did in the beginning.

By this time many slide makers about the country had vanished from the market place. Those surviving took whatever came their way in order to stay in business. Instead perhaps, of producing Illustrated Song Series, which had been replaced by the "Bouncing Ball" for singalongs at movie houses, men like Albert F. Prieger of Eugene, Oregon, produced slide series for the No Tobacco League of America, with headquarters at 831 Occidental Building, Indianapolis, Indiana. Its General Secretary, Charles M. Fillmore, said: "Let us teach the youth the **Truth** about tobacco."

Testimonials, illustrated with live action images of major political, sports, medical, and business people, supported the crusade. Gene Tunney, world's champion heavyweight boxer is shown stating, "I don't smoke or drink, etc." Herbert Hoover is quoted: "There is no agency in the world today that is so seriously affecting the health, education, efficiency, and character of boys and girls as the cigarette habit. Nearly every delinquent boy is a cigarette smoker." Walter Johnson, the great baseball player noted: "During my 20 years in the big leagues I have seen the careers of several promising young ball players ruined by the use of tobacco." Dr. Mayo is shown pointing out the perils of nicotine.

All endorsed the idea that smoking affected control and endurance. A view was shown that the sheer mass of cigarettes smoked yearly would create a band which would stretch many times around the earth. Not only were those somber facts illustrated by the slide series produced for the No Tobacco League by Mr. Prieger, but it was also pointed out that the $900,000,000 spent yearly for tobacco in the early 1920's would provide:

1,000 Churches	at	$ 24,000.00 each
1,000 Hospitals	at	$125,000.00 each
1,000 Colleges	at	$500,000.00 each
1,000 Gymnasiums	at	$ 50,000.00 each

2,000 Miles Paved Roads at$50,000 per mile, and still leave $100,000 for Red Cross Work.

Even our country's security was weakened. Draft Board statistics showed 110,000 of our young men rejected out of every one million drafted for the Great World War — rejected because of "Tobacco Heart."

"If they advertised the Truth," according to this slide series, "When you see a cigarette, think of Furfurol, one of the deadliest poisons known, produced in the burning cigarette."

Then a final proof is offered: "Let the smoker hold a paper above his mouth and blow smoke upon it until cigar or pipe is consumed. Then scrape paper where smoke is condensed and place a little on tongue of cat. The cat will die within three minutes."

Well, my cat is running a little short on lives, so I will just take the word of the No Tobacco League of America. Besides, the only smoke of interest to me comes from my old London magic lantern, and I'm not sure I'd walk a mile for it. You can believe . . .

the Old Projectionist

LETTER FROM THE CHAIRMAN:

Dick Balzer

Let me begin this letter by wishing all of you a belated but heartfelt wish for a happy and healthy New Year. This is going to be a terrific year for our Society. This letter comes as an enclosure with our newest jam packed *Bulletin.* Like the past *Bulletin,* this one was edited by Ed Lennert. Ed, who has agreed to continue his "temporary" editorship for an unstated period, says that he has the material for at least one more *Bulletin* and possibly a second. This is terrific. Still, I would encourage all of you who have given some thought to writing a piece to sit down and put pen to paper. We would love to expand the sources for the pieces that currently fill the *Bulletin.* I am sure Ed would be pleased to hear from you.

Jim Flanagan, our new treasurer, is doing a great job. He asked to make a financial report in this *Bulletin,* but I encouraged him to wait and give some of our members, who were slow to respond to his first letter, time to respond to his clever reminder that this year's dues are now overdue. The good news is that our membership which, when we met in Boston in June was on the decline, is once more heading in the right direction. Our next *Bulletin* will contain a financial report and the 1988 membership list. I hope that soon after receiving this *Bulletin* a number of you will rush out and sign up a new member.

Dick Evans continues, in his own modest and unobtrusive way, to publish a top quality *Bulletin.* I again want to publically thank him. In the last *Bulletin* he wrote about our beginning to reprint old prints. Hopefully you all got one as part of your 1988 membership. In the next *Bulltein* we will offer at very reasonable prices those prints we have already made.

Larry Rakow, in charge of special publications, has promised one or more reprints of the 1870's *Magic Lantern* journal.

This is a very ambitious program for 1988. I am confident that you will be pleased with this year's publications.

If you get a chance you might want to get a copy of the February issue of *Country Home.* Linda Joan Smith, a Society member, did a marvelous article about magic lanterns and gave the Society some free publicity.

At the end of January my work took me to England. As luck would have it my meetings just so happened to occur at the same time as the English Magic Lantern Society annual meeting. It was a great event. It was nice to see old friends, and to receive so many commpliments about our last convention. A highlight of the day was the auction which, although it seemed to last forever, saw a number of wonderful items pass hands and realized more than $16,000 in sales. The day was topped off with a great show by David and Leslie Evans.

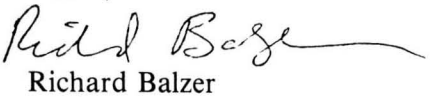
Each time I go to London I am impressed with how much they do with their Society. As usual they set a high standard of excellence and a constant positive challenge for us to do more.

While I was in London I had a chance to talk with Mervyn Heard, one of our English members. I had received a letter about a month earlier from Mervyn detailing a planned trip with his incredible Victorian Magic Lantern Show to the United States in the autumn of 1988. I have seen Mervyn do shows twice with what used to be "White's Wonders" and they were wonderful. Any of you who has had the chance to see Mervyn do his magic will agree that probably as much as any present day lanternist, he reminds us that at the heart of the magic lantern show is the lanternist as an entertainer and showman. Mervyn already has shows planned at the University of Iowa and the University of Texas. He will be here for approximately twelve weeks and is looking to set up other shows. He will be traveling with another performer and using a biunial. His shows are not inexpensive but they are an extraordinary event. Any of you who might be interested in trying to book him or trying to help organize shows in your area should write Mervyn directly for more details. His address is 22 Ottery Street, Otterton, East Devon, England EX9 7HW.

Finally, although this letter is about 1988, it isn't too early to begin thinking about 1989. A couple of months ago I received a letter from Bob Bishop exploring the possibility of the Seattle group staging our next convention in Seattle. I encourage our active Northwest group to take this initial tentative idea and turn it into a real proposal that we can all support.

I am looking forward to this year and to great things for our Society.

Yours,



Richard Balzer

DEAR SPOUSE: READ THIS

DREAM TRACKS: The Railroad and the American Indian 1890-1930 by T.C. McLuhan. Illustrated. 208 pp. (Abrams, $37.50)

Reviewed by Terry Borton

Magic lantern collectors are a tough bunch to find presents for. They don't want anything but lanterns or slides or moldy old catalogs, and they don't want those — unless they've found them all by themselves . . . or some other collector already has them.

Now here's the perfect present for the lantern collector — easy to locate, easy to store, beautiful, not *too* expensive, and clean!

Dream Tracks is a coffee table book — the first galmour book on American lantern slides. It includes more than 100 large reproductions of photographic slides of the Southwest scenery and Indians. Most of the slides were taken by official railroad photographers of the Santa Fe Railroad as part of a massive image-building campaign.

McLuhan (daughter of *The Medium is the Message Marshall*) is a scholar with several other books on Indians to her credit, the best-selling *Touch the Earth* and *Portraits From North American Indian Life.* In *Dream Tracks* she applies her scholarship to a study of the way the Santa Fe consciously used images of the Indians to overcome its reputation as a "streak of rust."

And what scholarship! Here is someone who can give 22 footnotes for four pages of text on "Calendar Art of the Santa Fe Railroad" and at the same time describe a slide showing the Petrified Forest in terms like these:

> At Rainbow Forest, you can take a stroll of more than a thousand years into the past, in a prehistoric foret where trees once grew grand but now have been turned to stone by the unending cycles of erosion and corrosion. . . . Crystals of every sort line the cavities of many of these recumbent trunks: amethyst, topaz, quartz, onyx. They are a sleeping world of glasslike rock. A mosaic of gem-studded iridescence. Chips, chunks, clumps, mother-of-pearl gilt, glisten, and illumine the desert pavement.

Many of the Indian pictures are fascinating — showing the Indians caught halfway between their earlier culture and their "symbolic reduction" to "American heritage." To be successful for the railroad's purpose, these pictures had to show a people who would fascinate, but not frighten the tourists. The railroads were successful, for the tourists (or "detourists" as they were called) were bused by the thousands from the railway lines to watch the Indian snake dances and other rituals.

Though the power of *Dream Tracks* is in the pictures and captions, more than in the expository introduction, a fairly detailed discussion of the magic lantern and its use by railroad photographers will have special interest for Society members. Several of these photographers, such as William Henry Jackson, had private railway cars — half lounge, half studio. They worked full-time taking pictures for the railroads — Jackson took more than 30,000 in his career. His wife worked with him as a slide colorist, and Jackson often gave lantern shows of his work aboard the train.

Critical reception of *Dream Tracks* has been very positive. It was reviewed in *The New York Times* and *Newsweek,* as well as in regional publications. The hand coloring of the slides seems to have been especially fascinating to the reviews. As McLuhan herself points out, the coloring varies from the garish to the beautifully subtle, but for people who think of old photographs are necessarily black and white, color of any sort is a revelation.

Ah, a revelation! That, dear Sice, is what I trust you have had. Birthday happiness for your magic lantern collector is assured.

A MAGIC LANTERN BIBLIOGRAPHY FOR LANTERNS IN EDUCATION

Bothamley, C.W. "The Optical Lantern as an Aid to Teaching," *Review of Reviews,* May 1890, p. 404. (Compares lantern slides to diagrams. Lists subjects for which lantern slide views are available)

Brown, J.W., R.B. Lewis and F.F. Harcleroad. *A-V Instruction, Media and Methods,* New York, McGraw-Hill, 1969. (States that lantern slides are still available, and lists the fields in which they are still used)

Dade, E. *Audio-visual Methods in Teaching,* New York, Dryden Press, 1954. (Contains a discussion of the advantages and disadvantages of using projected images in education)

"Educational Value of the Projection Lantern and some Projection Lanterns," *Journal of Education,* January 12, 1911, pp. 38-40. (Discusses the popularity of the lantern as an educational aid, and describes some of the equipment available)

Hobbs, W.H. "Use of Lantern Views with Science Lectures," *Journal of Georaphy,* April 1909, pp. 180-6.

Hurll, E.M.H. "Picture study in Education," *Outlook,* January 21, 1899, pp. 174-6.

Getchell, Edward L. "Picture in Education," *Journal of Education,* September 26, 1912, p. 321. (Describes teaching methods used with lantern slides, recommends slides manufactured by the Keystone View Company)

Morsell, W.F.C. "Lantern in the School," *Education,* May 1893, pp. 558-64. (Argues in favor of lantern slides as a teaching aid, explores physiological bases for perception and memory. Lists subjects for which lantern slides are a useful teaching aid)

Paddock, M.H. "Pictured Instruction, The Stereopticon and its Use in Schools," *Education,* January 1898, pp. 300-6.

Pearson, H.C. "Apperception and the Classics," *Education,* September 1896. (Argues for the use of the lantern as a means of arousing a student's interest in his studies, and for creating a fondness and desire for learning)

Stead, W.T. "Magic Lantern Mission," *Review of Reviews,* December 1890, pp. 561-7. (Encourages lantern slide lectures in evangelical work)

Swain, R. "Stereopticon in Secondary Teaching," *School Review,* February 1902, pp. 146-53. (Discusses the superiority of lantern slides to book illustrations. Includes technical information light sources for optical lanterns)

Weber, Joseph. *Visual Aids in Education,* Valparaiso, Indiana, Valparaiso University, 1930

Visual Teaching with Kodaslides. Rochester, N.Y. Eastman Kodak Co., 1940. (Discusses the decreased popularity of lantern slides following the advent of 2x2-inch slides)

NEW MEMBERS

Silver, Jodi
P.O. Box 54
Minot, MA 02055
H. ( ) 545-1050
B. ( ) 659-0460
Occupation: Program Director of Community T.V.
Interests: Kenetic devices, slides and literature.

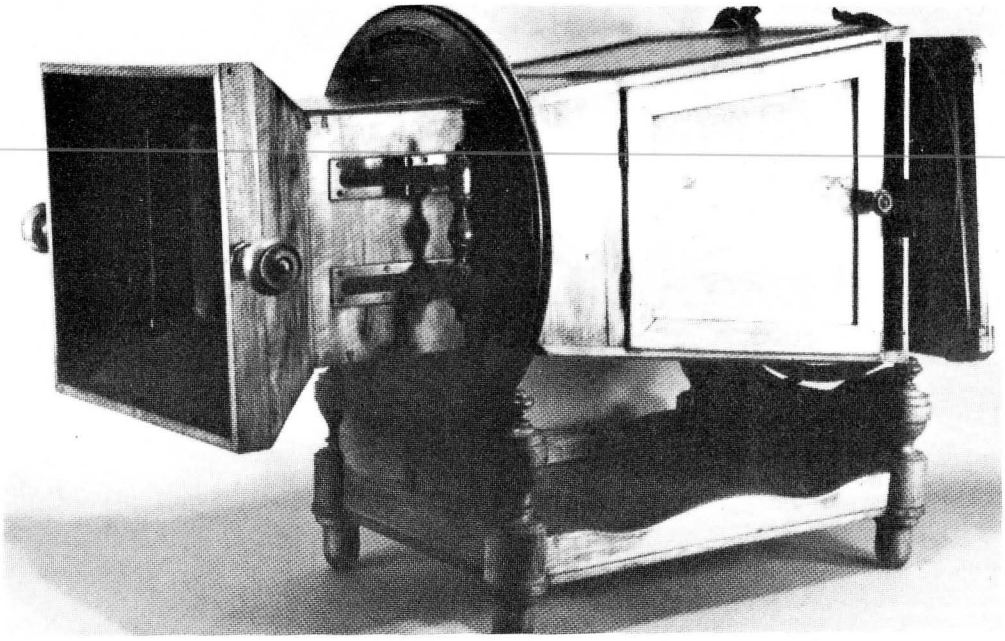
Roberts, K.G.
24 North third St.
Bangor, PA 18013
Interests: Kenetic devices, glass slides, literature, and tin kerosene lamps.

Wilson, Robert G.
267 St. Leonards Ave.
Toronto, Ontario
Canada MXN 1K9
H. (416) 485-1183
B. (416) 968-5104
Interests: Any lantern slides or published photographs of Canada.

Lange-Fuchs, Hanke
Barsten Kamp 32
D2300 KIEL 1 SCHULENSEE
West Germany

Brey, William A.
1916 Cardinal Lake Drive
Cherry Hill, NJ 08003
H. (609) 428-0759
Occupation: Retired
Interest: Lanterns, catalogs, history of photography before 1900.
Will buy/sell/trade.

Katler, Caryl and Marshall
34 Adams St.
Holbrook, MA 02343
H. (617) 767-2217
B. (617) 333-0690
Occupations: Museum Asst. Director (Caryl)
Physiology Researcher (Marshall)
Interests: Lanterns, slides, literature and optical devices. Are developing children's programs and articles on lantern projectors, kenetic devices, daguerreotypes and cameras.
Will buy/sell/trade.



From the collection of Dick Balzer

The Optical Devices of Leland Stanford Jr.

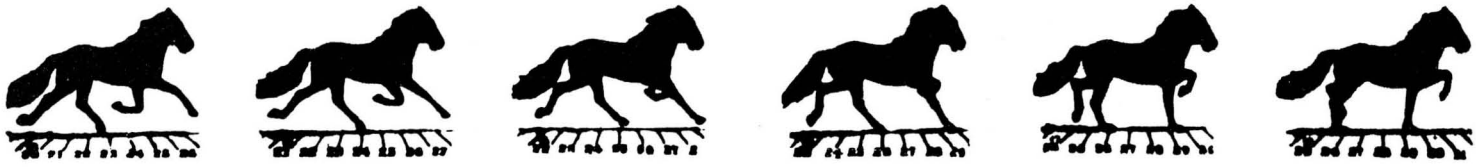
By Leora Wood Wells

Leland Stanford, pre-Civil War governor of California, longtime railway president and eventually U.S. Senator believed, like many Victorian parents, in the value of scientific instruments in the stimulation and education of children. His son, Leland Junior, was born in 1868. His optical toys are now on display at the university in Palo Alto, California, that bears his name. He owned a small, square EP lantern which had — appropriately, considering his father's work — at least one train slide. He also had a hand held stereoscope and a table top mutoscope through which he could see wonderful three dimensional images.

There must have been a larger, more sophisticated lantern as well, because his collection of wood framed lantern slides includes dissolving slides, a crank type "snow" slide of perforated paper and an 1855 Carpenter and Westley motion slide of a lion attacking a horse.

But the piece de resistance in the display is a Megalethoscope made in the late 1860's by Carlo Ponti of Venice, a maker of optical instruments from 1858 to 1875 and optician to King Victor Emmanuel II. Like a similar but larger device made by Daguerre in the 1830's, the Megalethoscope uses translucent paper or linen slides which give dioramic effects. As the illumination changes, daylight scenes fade into twilight and lights appear in the windows of the buildings through tiny pinholes in the slides.

Leland Stanford must have rejoiced in buying this magnificent, hand-carved device for his son. He bought it for him in the early 1880's during a trip to Venice. But Leland Junior's enjoyment of it was brief. In 1884, at the age of 16, he died of typhoid fever. Unable to achieve the fulfilment of their dreams for their son, the grief-stricken parents founded Stanford University in his honor, and his optical collection is now a central feature in a hall of family memorabilia.



Leland Stanford commissioned Edward Muybridge to photograph a horse trotting in order to determine whether all four legs are ever off the ground at once.

Travels in the Limelight: Projections of the World Through the Magic Lantern

1880-1930
Exhibition held at Visual Studies Workshop
Research Center Gallery
December 3, 1982 - January 29, 1983

Curated by:
Robert Hewitt, Glenn Knudsen
David Kwasigroh, James Via

The following is a monograph produced for that exhibit. It is reproduced with the permission of Visual Studies Workshop, 31 Prince St. Rochester N.Y. 14607.

The use of the magic lantern as a means of projecting pictures began in the 17th century. The Jesuit scholar Athanasius Kircher published in 1646 his book, *The Great Art of Light and Shade,* in which he described the principles on which the lantern is based, and possibly if he had had access to a more powerful source of illumination than a candle or a smoky oil lamp, he would have advanced from theory to practice. The working details of lantern projection were

described in 1659 by Dutch scientist Christian Hug gens, and in the 1660's and 1670's magic lantern demonstrations were given in various parts of Europe by the Dane Thomas Rasmusser Walgersten. At this time the magic lantern was used solely for entertainment, and it played a central role in optical magic. In popular performances known as Phantasmagoria, magicians could conjure up human forms and spirits by projecting hand-painted pictures on glass slides onto columns of smoke or cloth screens. By moving the lantern closer or further from the screen the effect of retreating or advancing movement was obtained. The lantern's role in these performances was not a recognized one, as magicians were necessarily secretive aobut their methods and the general public was scarcely aware of this invention.

Lack of an efficient lamp restricted the progress of the magic lantern until the discovery by Sir Goldsworthy Gurney of the powerful limelight illumination in 1825. This development made possible projection from the rear of the auditorium. The magic lantern became visible to the general public in the mid-19th century when it came into use by lecturers. But as long as the pictures had to be drawn and painted on glass by hand the lantern had limited use and was regarded by most people as being merely a toy. In 1848 the discovery by Niepce de St. Victor of a transparent base for a photographic image made possible the commercial introduction by Frederick and William Langenheim of Philadelphia, of photographic slides which were more accurate in representation, cheaper to produce than hand-painted ones. By 1860, the Langenheims were engaged in full-time production of lantern slides, which they called stereopticon slides. With this development the toy became a marketable and valuable scientific and educational tool. Sir David Brewster wrote in 1870:

> The magic lantern, which for a long time was used only as an instrument for amusing children and astonishing the ignorant has recently been fitted up for the better purpose of conveying scientific instruction, and it is now universally used by popular lecturers . . .
>
> The magic lantern may be employed in almost every branch of scientific instruction where it is desirable to give distinct and enlarged representation of phenomena to a public class. The lecturer is thus saved the trouble of carrying about with him unwieldly diagrams, which are soon destroyed by use and rendered unfit for their intended purpose.

With the advent of the photographic lantern slide the size of the picture was reduced from the 5" x 8" size common to hand-painted slides, to 3¼" x 4" for American-made slides and 3¼" x 3¼" for British-made ones. This made possible a reduction in the dimensions of the lantern as well. There were two types of views available for the lantern: Views direct from nature and reproductions of engravings, paintings and drawings. Both types were frequently hand-tinted using oil and watercolors. Most photographic lantern slides were made by exposing glass plate negative material through finished negatives in contact. This produced a positive on glass. Lantern slides were also made by the carbon and Woodburytype processes. Around 1907 a direct positive process for producing black-and-white slides was announced by the British amateur photographer W. Wood. Also beginning at this time, natural color slides were made in quantity using the early color processes: Autochrome, Finlay Color, Dufay Color, Paget Color and Agfacolor.

The Langeinheim Brothers

Lantern slides became popular as an instructional tool in the classroom due to their low cost and their superiority to other forms of visual information available during the late 19th and early 20th centuries. Educators during this period were carefully investigating the processes by which knowledge is obtained and retained. Actual contact with the object of study was clearly the ideal, but when this was impossible the closest approximation to sensory perception had to be made. With the use of the projection lantern and a wide variety of lantern slide views the possibilities for applying this principle seemed to be limitless. Since slide projection required darkening of the room there was nothing to distract students; their voluntary and involuntary attention was drawn to the image on the screen. This resulted in sharp impressions, vivid recollections, and perhaps most importantly, heightened interest. For this reason lantern slide images proved superior to book illustrations. A University of Kansas study indicated that a lantern slide image was remembered longer than a photographic print.

By 1900 a good stock of slides was recognized as being one of the best possible investments, and most educational institutions owned extensive sets of slides covering a wide variety of subjects, including geography, ethnography, history, natural sciences, religion, art and technology. W.H. Hobbs wrote:

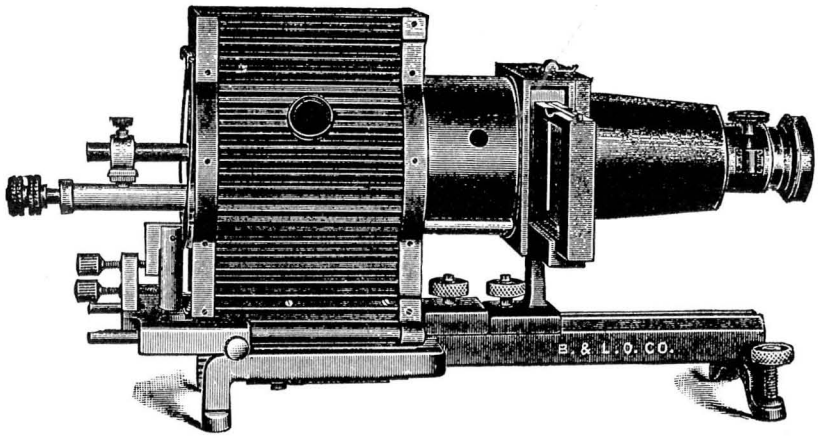
> A teacher who for any other reason than lack of necessary funds fails to provide lantern projection of some sort in illustration of his general lectures in geology or physiography is neglecting a most important opportunity of reaching a student's mind through the eye — an opportunity which the present generation has been the first to realize.[2]

Two instructional techniques evolved for the use of lantern slides: the "lecture-room method" and the "school-room method." In the lecture-room method the slides were projected and the teacher presented his lecture as the images were shown. Notes were taken by the students during the presentation and the information was discussed later. The school-room method involved the assignment of one particular slide to each student in advance. The students then prepared a brief talk about the slides assigned to them, and when the recitation period came, each student projected his or her own slide and explained its interest or value to the rest of the class. In this way the lantern came to be thought of an an invaluable tool in developing oral communication skills.

Lantern slides produced by the Keystone View Company were favored due to their fine classification and cross-referencing system. The Keystone Company often made both lantern slides and stereographs from the same negative, and used the same number to index both types of views. Lantern slides remained a popular visual aid in education until the 1930's when they were gradually superceded by the 35mm slide. They did not become entirely obsolete however, as a 1969 audio-visual instruction manual notes:

> Although their use is considerable less common today than in the first days of the "Keystone 600 Set," the 3¼ x 4-inch lantern slides are still available and used occasionally in some specialized fields such as art, medicine or science. The principle advantage of this larger slide over the 2 x 2-inch type is its larger transparency image and some increase in detail and screen brilliance.[3]

Bausch & Lomb
New School Projection Lantern C



Every teacher to-day recognizes the advantages to teacher as well as pupil of the wider use of the Projection Lantern in the classroom.

Our Lantern C has been especially designed for school work. It is a thoroughly high-grade apparatus, and while equipped with our latest improvements we can offer it at a price which brings it within the reach of even the elementary school. The construction of this Lantern is such as to permit the instant change from ordinary projection to microscope projection, and thereby adds greatly to its scope of usefulness.

The advantages of a lantern in the social affairs of a school also readily suggest themselves

This device is simple, efficient, portable—may be easily removed from one room to another —and practically covers the whole range of school projection work.

Price complete, **$50**; with Acetylene Burner, **$45.**

Send for descriptive Circular.

PRISM is a little Magazine of Lens Information. Send for copy.

Our name on a Photographic Lens, Field Glass, Microscope, Laboratory Apparatus, Scientific or Engineering Instrument is a mark of quality.

BAUSCH & LOMB OPTICAL COMPANY

Carl Zeiss, Jena — George N. Saegmuller

B-L Z S

Offices: New York, Boston, Chicago, San Francisco, Washington, London, Frankfort

ROCHESTER, N. Y.

Education was the most common, but certainly not the only application for lantern slides. They enjoyed a degree of popularity among amateur photographers in the 1890's. Slide-making was practiced by some of the leading fine-art photographers of the day, including Paul Martin, William Frazer and Alfred Stieglitz.

Three things point to the advancement of lantern slides within the scope of photographic art. First, since enlargement had not yet become feasible at the time, lantern slides, which would be projected to a large image size, were the only means by which photographers could produce truly impressive results with the smaller ¼-plate cameras.

The proliferation of camera clubs and amateur societies was the second factor in encouraging the production of lantern slides by art-photographers. Club meetings created the desire for an image that could be viewed simultaneously by a number of people, a desire which the projected slide fulfilled. By pooling financial resources the club members could share the cost of a lantern which would normally be beyond the means of an individual.

The pioneering work of Alfred Stieglitz was the third element in realizing the artistic possibilities of lantern slides. Stieglitz devised techniques for the local toning and reduction of slide images to modify their tonal values, and for making cover glasses which eliminated the clear skies common in images made on glass plates. By contact, very underexposed negatives were made from the slides, and these negative copies were then used as cover glasses. Whereas normal negatives would render the sky very dense, an underexposed negative produced a thin but visible "sky". This

technqiue was also used for pictures with reflections, water scenes and "wet-night" scenes. Stieglitz declared in October 1897:

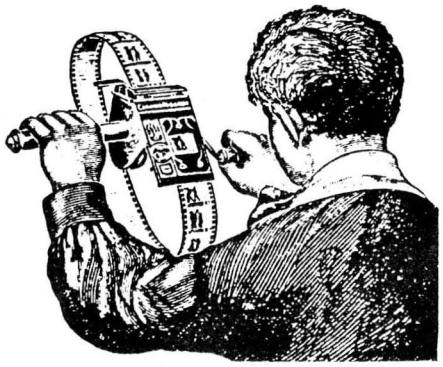
> The past twelve months of the Camera Club of New York will, without question, be known in the pages of its annuals as the "Lantern Slide Year". Never before was there so much work done, or so much interest shown in this most peculiarly fascinating branch of photography.[4]

Lantern slide-illustrated lectures were a popular form of public entertainment from about 1860 to 1900. At the turn of the century the popularity of these lectures was eclipsed by the advent of the cinema, a medium which evolved out of the same technologies and traditions as lantern slide projection. Motion pictures, lantern slides and stereographs are so closely linked, in fact, that an understanding of any one of these three media can be strengthened by an investigation of the other two.

From a contemporary viewpoint, lantern slides are useful in helping to gain insight into the ideologies which were prevalent during the time of their use. Many of the beliefs and attitudes about the world and its people were the direct result of the information presented by the lantern slide. These slides are of great historical and sociological value, and since so many them have survived in excellent condition, they provide an important resource for understanding the world as it was seen then, projected by the limelight.

NOTES:

1. *The Magic Lantern,* London, Houlston and Wright. 1870, p. 9.
2. W.H. Hobbs, "Use of Lantern Views with Science Lectures." *Journal of Geography.* April 1909, p. 180.
3. J.W. Brown, R.B. Lewis and F.F. Harcleroad. *AV-Instruction, Media and Methods.* New York, McGraw-Hill, 1969, p. 235.
4. William B. Welling. *Photography in America: The Formative Years 1839-1900.* New York, Thomas Y. Crowell Co., 1978, p. 380.



THE MAGIC LANTERN SOCIETY OF THE UNITED STATES AND CANADA

Chairman: Dick Balzer
897 Belmont Street
Watertown, MA 02172

Editor: **The Magic Lantern Bulletin**
Edward Lennert
96 Lac Kine Drive
Rochester, NY 14618

Secretary/Treasurer:
James Flanagan
P.O. Box 431
Sparta, NJ 07871

The Magic Lantern Bulletin is printed by Evans Printing, Solon, Ohio